

REMARKS

Favorable reconsideration of this application is requested in view of the foregoing amendments and the following remarks. Claims 1-11, 15 and 25-37 are pending in the application. Claims 12-14, 16-24 and 27 were previously canceled without prejudice or disclaimer. Claims 35-37 are newly presented.

The claims are amended in order to more clearly define the invention, support for which is found in the figures and related parts of the specification. Specifically, support for the recitation of the carrier frequencies each precisely an integer multiple of the bit rate is found at page 8, lines 20-22 and at page 14, equation (3). Support for the recitation of the chip rate being an integral (integer) multiple of the bit rate greater than or equal to 2 is found in figure 1.

Support for the recitation of with zero relative phase differences and an integral multiple of $1/2$ a bit rate in claim 32 is found at page 9, lines 19-22. Support for the recitation of with relative phase differences and an integral multiple of $1/2^x$ a bit rate, where x is a counting number in claim 34 is found at page 9, lines 13-19.

Support for the change to claim 33 is found in claim 2 as originally filed. Support for new claims 35 and 37 are found in claim 5 as originally filed. Support for new claim 36 is found in claim 2 as originally filed.

Claims 1, 7, 10, 28 and 32-34 stand rejected under 35 USC 102(b) as anticipated by Jung-yeol Oh et al. ("The bandwidth efficiency increasing method of multi-carrier CDMA and its performance evaluation in comparison with DS-CDMA with rake receiver", Vehicular Technology Conference, May 16-20, 1999, Pg. 561-565) (hereinafter Oh).

First, Oh does not disclose or suggest overlapping a plurality of direct-sequence spread-spectrum signals using carrier frequencies that are each precisely an integer multiple of a bit rate. Oh's symbol rate is the effective channel modulation rate and not the claimed bit rate which

is the original data rate (not to be confused with the spread spectrum chipping rate). The OFDM component of Oh must have orthogonal carrier spacings equal to multiples of the direct sequence chipping rate (not to be confused with the original data rate prior to spread spectrum modulation). Thus, Oh's OFDM carrier frequency spacings are according to the direct sequence chipping rate (which is much greater than the original bit rate, by a factor of the direct sequence polynomial length).

Second, Oh does not disclose or suggest overlapping a plurality of direct-sequence spread-spectrum signals using carrier frequencies that are orthogonally spaced relative to an integral multiple of a the bit rate rather than a chip rate, where the chip rate is an integer multiple of the bit rate and is greater than or equal to two.

It is important to note that based on the terminology used by Applicants in the specification as originally filed (and as specifically depicted in figure 1), the bit time period includes multiple chip time periods and therefore, the bit rate is slower than the chip rate.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 2-3, 6 and 29 were rejected under 35 USC 103 as obvious over Oh in view of Li Enjia et al. ("The study of FH/MCFD/SSMA/DPSK wireless communications system", International Conference on Communications Technology, ICCT'98, Oct. 22-24, 1998, Pg. S18-06-1 – S18-06-5); (hereinafter Enjia).

Enjia does not obviate the above-discussed deficiencies of Oh.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 4 and 9 were rejected under 35 USC 103 as obvious over Oh in view of Haines (5,469,469) (hereinafter Haines).

Haines does not obviate the above-discussed deficiencies of Oh.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 5 and 30-31 stand rejected under 35 USC 103 as obvious over Oh in view of Azad ("Multirate Spread Spectrum Direct Sequence CDMA techniques", IEE Colloquium on Spread Spectrum Technique, 15 April, 1994, Pg. 4/1 – 4/5) (hereinafter Azad).

Azad does not obviate the above-discussed deficiencies of Oh.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 8 and 25-26 stand rejected under 35 USC 103 as obvious over Oh in view of Yun (6,243,397) (hereinafter Yun).

Yun does not obviate the above-discussed deficiencies of Oh.

Accordingly, withdrawal of this rejection is respectfully requested.

Claim 11 stands rejected under 35 USC 103 as obvious over Oh in view of Natali (5,623,487) (hereinafter Natali).

Natali does not obviate the above-discussed deficiencies of Oh.

Accordingly, withdrawal of this rejection is respectfully requested.

Other than as explicitly set forth above, this reply does not include acquiescence to statements, assertions, assumptions, conclusions, or combination thereof in the Office Action. In view of the above, all the claims are considered patentable and allowance of all the claims is respectfully requested. The Examiner is invited to telephone the undersigned (at direct line 512-394-0118) for prompt action in the event any issues remain that prevent the allowance of any pending claims.

In accordance with 37 CFR 1.136(a) pertaining to patent application processing fees, Applicant requests an extension of time from August 6, 2004 to November 6, 2004 in which to respond to the Office Action dated May 6, 2004. A notification of extension of time is filed herewith. A petition for revival of unintentionally abandoned application is also filed herewith.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3204 of John Bruckner PC.

Respectfully submitted,

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